Requested Patent: WO9427569A1

Title: SKIN TREATMENT METHOD UTILIZING A COMPOSITION AND A PAD ;

Abstracted Patent: WO9427569 ;

Publication Date: 1994-12-08 ;

Inventor(s): SHAFFER BURT; RAPAPORT JEFFREY ;

Applicant(s): DERMATOLOGY HOME PROD INC (US); PHARMAGEN INC (US) ;

Application Number: WO1994US06443 19940601 ;

Priority Number(s):

US19930070553 19930601; US19930070559 19930601; US19930070560 19930601; US19930109821 19930820; US19930109824 19930820; US19930109825 19930820; US19930110133 19930820 ;

IPC Classification: A61K7/48 ;

Equivalents: AU7056894, CA2164229, EP0703775 (WO9427569), A4 ;

ABSTRACT:

A method employing a novel combination of a skin care composition and cosmetic applicator pad is provided for at-home skin degreasing, peeling and/or exfoliating and moisturizing, which is gentle in that the concentrations of the active skin peeling and/or degreasing, exfoliating and moisturizing ingredient, principally an alpha hydroxy acid, or a mixture of alpha hydroxy acids, preferably including acetone, is far lower than that routinely used for professional use in the offices of professional dermatologists, aestheticians and/or cosmetologists. The composition of the present invention is provided in a suitable pharmaceutical vehicle and is presaturated into a convenient cosmetic applicator pad.

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 5 : A61K 7/48 — A1

(11) International Publication Number: WO 94/27569

(43) International Publication Date: 8 December 1994 (08.12.94)

(21) International Application Number: PCT/US94/06443

(22) International Filing Date: 1 June 1994 (01.06.94)

(30) Priority Data:

08/070,553	1 June 1993 (01.06.93)	US
08/070,559	1 June 1993 (01.06.93)	US
08/070,560	1 June 1993 (01.06.93)	US
08/109,821	20 August 1993 (20.08.93)	US
08/109,824	20 August 1993 (20.08.93)	US
08/109,825	20 August 1993 (20.08.93)	US
08/110,133	20 August 1993 (20.08.93)	US

(71) Applicants: DERMATOLOGY HOME PRODUCTS, INC. [US/US]; 810 Abbott Boulevard, Fort Lee, NJ 07024 (US). PHARMAGEN, INC. [US/US]; 155 Knickerbocker Avenue, Bohemia, NY 11716 (US).

(72) Inventors: SHAFFER, Burt; 6 Fleetwood Drive, Huntington Bay, NY 11743 (US). RAPAPORT, Jeffrey; 810 Abbott Boulevard, Fort Lee, NJ 07024 (US).

(74) Agent: WALKER, Alfred, M.; 742 Veterans Memorial Highway, Hauppauge, NY 11788 (US).

(81) Designated States: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE (Utility model), DK, ES, FI, GB, GE, HU, JP, KG, KP, KR, KZ, LK, LU, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published
With international search report.

(54) Title: SKIN TREATMENT METHOD UTILIZING A COMPOSITION AND A PAD

(57) Abstract

A method employing a novel combination of a skin care composition and cosmetic applicator pad is provided for at-home skin degreasing, peeling and/or exfoliating and moisturizing, which is gentle in that the concentrations of the active skin peeling and/or degreasing, exfoliating and moisturizing ingredient, principally an alpha hydroxy acid, or a mixture of alpha hydroxy acids, preferably including acetone, is far lower than that routinely used for professional use in the offices of professional dermatologists, aestheticians and/or cosmetologists. The composition of the present invention is provided in a suitable pharmaceutical vehicle and is presaturated into a convenient cosmetic applicator pad.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	**GB**	United Kingdom	**MR**	Mauritania
AU	Australia	**GE**	Georgia	**MW**	Malawi
BB	Barbados	**GN**	Guinea	**NE**	Niger
BE	Belgium	**GR**	Greece	**NL**	Netherlands
BF	Burkina Faso	**HU**	Hungary	**NO**	Norway
BG	Bulgaria	**IE**	Ireland	**NZ**	New Zealand
BJ	Benin	**IT**	Italy	**PL**	Poland
BR	Brazil	**JP**	Japan	**PT**	Portugal
BY	Belarus	**KE**	Kenya	**RO**	Romania
CA	Canada	**KG**	Kyrgystan	**RU**	Russian Federation
CF	Central African Republic	**KP**	Democratic People's Republic of Korea	**SD**	Sudan
CG	Congo			**SE**	Sweden
CH	Switzerland	**KR**	Republic of Korea	**SI**	Slovenia
CI	Côte d'Ivoire	**KZ**	Kazakhstan	**SK**	Slovakia
CM	Cameroon	**LI**	Liechtenstein	**SN**	Senegal
CN	China	**LK**	Sri Lanka	**TD**	Chad
CS	Czechoslovakia	**LU**	Luxembourg	**TG**	Togo
CZ	Czech Republic	**LV**	Latvia	**TJ**	Tajikistan
DE	Germany	**MC**	Monaco	**TT**	Trinidad and Tobago
DK	Denmark	**MD**	Republic of Moldova	**UA**	Ukraine
ES	Spain	**MG**	Madagascar	**US**	United States of America
FI	Finland	**ML**	Mali	**UZ**	Uzbekistan
FR	France	**MN**	Mongolia	**VN**	Viet Nam
GA	Gabon				

SKIN TREATMENT METHOD UTILIZING A COMPOSITION AND A PAD

The present invention relates to topical compositions for producing healthy, youthful, attractive, natural looking human skin, and for addressing certain problem skin conditions, including aging skin, dry skin, photo aged skin, i.e., sun damaged skin, hyperpigmentation [brown and black blotches] or darkly pigmented skin [e.g. natural skin pigmentation of black persons], acne, eczema, thin skin, which occurs commonly in Caucasian women between the ages of 25 and 40, where skin thickness is reduced, sensitive skin and composite dry-oily skin also known as T-zone oily skin.

BACKGROUND OF THE INVENTION

It is known that the epidermal, or outer layers of human skin can be caused to peel by applying alpha hydroxy acid ("AHA") containing preparations, such as glycolic acid, in order to remove dead skin and to wound underlying living skin tissue. The beneficial result of such skin peeling is that when underlying layers of skin are exposed, the underlying skin is relatively free of age lines, superficial wrinkles, acne scarring, scaliness, pigment spots, aging spots, acne lesions, and, with an appropriate topical composition, without the same relative degree of hyperpigmentation as compared to the same skin before a topical peeling composition was applied.

Removing old, dead surface skin cells exposes younger underlying skin tissue, which looks more youthful in part because it is smoother and reflects light more readily, thus rendering a "healthy glow" appearance. Removal of the buildup of dead skin cells is critical to producing younger-looking skin because the dead cell buildup is partly responsible for the rough, dry look associated with superficial fine lines, crow's feet, wrinkles and the like.

Skin exfoliation involves removing the surface layer of dead skin cells. To accomplish this, the surface dead cells must be penetrated and either removed by manual methods employing mechanical activity or by chemical

methods in which surface dead cells must be penetrated by the exfoliating agents.

The present invention also uses AHAs, and preferably and particularly the AHA glycolic acid, as an agent to loosen the bonds between dead skin cells and underlying living tissue and stimulate the living skin tissue to form new collagen and to metabolically remove and reorganize dead cells and detritus.

In contrast, products which are solely peeling agents and/or exfoliants, such as salicylic acid, even when provided in an applicator pad, involve only contact with and removal of all or a portion of the surface dead skin, without affecting the underlying living skin tissue.

Exfoliation of the skin is a more gentle skin treatment process than chemical peeling, since exfoliation, unlike peeling, removes only dead skin cells from the skin surface and does not wound living cells. Peeling, in contrast, wounds living skin cells and stimulates both healing and the production of collagen and other cellular materials.

DISCUSSION OF THE PRIOR ART

Various attempts have been made to utilize alpha-hydroxy acids, such as glycolic acid, in skin care products, as noted in U.S. patent Numbers 3,879,537, 3,920,835, 3,984,566, 3,988,470, 4,021,572, 4,105,783, 4,197,316, 4,234,599, 4,246,261, 4,363,815, 4,380,549, and 4,363,815 of Van Scott and Yu, as well as U.S. Patent Numbers 4,294,852 of Wildnauer.

However, such patents do not disclose the use of an alpha-hydroxy acid, such as glycolic acid, impregnated into a pad, such as a medicated cleansing pad or a cosmetic applicator pad for frequent periodic use and the application thereof.

Cosmetic applicator pads and/or medicated cleansing pads fabricated for very specific material compositions have been described in use with salicylic acid and alcohol, as noted in U.S. patent no. 4,891,228 of Thaman.

However, alpha hydroxy acids, such as glycolic acid are much better at treating skin conditions, because of their activity in relation to the removal of dead skin layers and moisturizing and treating live skin. Moreover, glycolic acid is the preferred alpha hydroxy acid because it penetrates the dermal layers better by virtue of its relatively smaller molecular size than other alpha hydroxy acids having larger molecular sizes, such as lactic acid. Alternatively, glycolic acid acts at peeling and/or exfoliating skin when used synergistically in combination with relatively low concentrations of acetone.

Other related preparations for skin treatment include U.S. patent Nos. 4,035,513 of Kumano, 4,124,720 of Wenmaekers, 4,195,077 of Marsh, 4,287,214 of Van Scott and Yu, 4,608,370 of Aronsohn, 4,695,452 of Gannis, 4,824,865 of Bowser, 4,830,854 of Copelan, 4,931,591 of Buhlmayer, 5,110,603 of Rau and 5,164,413 of Willis.

In connection with the alternate topical use of acetone, the following prior art is relevant: U.S patent 5,133,967 to Smith for a skin toning composition which proposes the use of glycol ether instead of acetone and alcohol to degrease and de-fat the skin. U.S. patent 5,154,174 describes the use of acetone as a skin drying agent in preparation for attachment of transdermal electrodes to the skin. U.S. patents 5,145,858 and 5,140,047, 5,134,150 and 4,847,270 for bactericides teach acetone for drying the skin, in conjunction with moisturizers, such as glycerol or castor oil. U.S. 5,091,379 describes acetone in an anti-inflammatory composition. U.S. patent 5,049,381 and 4,980,378 disclose the use of acetone for penetration of skin tanning coloration compositions or products. Moreover, the New Jersey Department of Health "Hazardous Substances Fact Sheet: Acetone" Cas. No. 67-64-1, DOT No. UN 1090 Feb. 1989 warns that excessive use of acetone causes skin dryness.

However, none of these prior art documents teach the use of acetone as a peeling agent, as opposed to a drying

agent. However, such use can be supported, since in high concentrations acetone has been shown to cause blistering or excessive peeling by abnormal erosion of skin layers, as noted in Kechijian, "Nail Polish Removers: Are They Harmful?", Dept. of Dermatology, N.Y.U. School of Medicine, New York, N.Y., published by W.B. Saunders Company, 1991.

In the prior art, chemical peeling has been done in dermatologists' aestheticians' and cosmetologists' offices, and has been accomplished over a period of minutes or hours, generally in a single visit. The problems with such chemical peels include use of relatively high concentrations of such peeling agents as AHAs, including the use of glycolic acid, trichloroacetic acid and phenol compounded into a suitable vehicle, with concentrations being typically from 30% up to as much as 90% in the prior art. Traditional chemical peeling, then, has been swift, harsh, often painful, and, due to the harshness has been undesirable.

In the course of chemical peeling surface debris, including dead skin cells, are removed partly through mechanical abrasive action of applying and removing the chemical peel agents and partly through the activity of the chemical peeling agents which, among other effects, break bonds by which dead skin cells adhere to living skin cells. In the prior art, peeling agents have been applied and then neutralized and/or physically removed from the skin after the desired treatment time period has elapsed.

Chemical peeling can be done in varying degrees of depth, typically called light, or superficial, and medium and deep peels. A light peel is generally one which is comparatively superficial in effect and a deep chemical peel is one in which peeling agents are used to produce a moderate to severe wound to the skin. However, a deep peel achieves a much more profound effect, and does so quickly, in minutes or hours. As a result, pain and inflammation usually result. Deep peeling usually produces redness lasting several days, a large and deep separation of dead

skin, and the exposure of what, before the deep peel, was relatively deep living skin tissue.

The results of deep peeling are not equivalent to the results of light or superficial peels or exfoliation. Whereas deep peeling potentially produces undesirable redness, itching, pain, inflammation and unwanted or excessive peeling of living tissue which may last days after the deep peel treatment, light peels produce few or no such undesirable side effects. The cosmetic results of deep peeling are more dramatic and more visible than the results available with light and medium peeling and exfoliation.

But where excessive or prolonged and unwanted peeling occurs in the aftermath of a deep peel treatment, it is difficult or impossible to apply cosmetics to the affected skin due to the continued peeling and due to the pain, itching, inflammation and redness of the skin.

However, it should be noted that prior art peeling is accomplished by the application of high-concentration peeling agents either in a single treatment session, or, at most, over a period of repetitive treatments over several days or weeks in a professional setting, i.e., the office of a dermatologist, an aesthetician or a cosmetologist.

As a general matter, skin to be peeled has been first degreased in the prior art. In some prior art, there has also been another intermediate preparatory step in which various agents are applied to the skin in order to more effectively degrease it. After the skin is prepared by degreasing, the peeling agents have been applied in the prior art. The peeling agents are then neutralized and/or removed after a non-standardized duration. Finally, affected skin has been topically treated with a moisturizer or other after-care preparation.

Moreover, even where mere exfoliants are used, such as salicylic acid in combination with alcohol, as disclosed in Thaman, the results are not as beneficial as in the present invention, where alpha hydroxy acids are used.

The AHA's of the present invention serve not only as agents for skin peeling and/or exfoliating, but also as skin moisturizers, by virtue of their humectant qualities.

In addition, the prior art does not provide for standardization of peeling or exfoliation. For example, a professional practitioner, i.e., a dermatologist, aesthetician or cosmetologist applies skin peeling agents which the practitioner has purchased containing individual ingredients such as glycolic acid. Prior art practitioners have used a variety of application methods, with no standardized quantity of agents being applied. Therefore there is no standardization of any part of the chemical peeling process in any of the prior art. By so doing, there can be no standardization of peeling materials or their concentrations among skin treatment practitioners.

In addition to the widely variable ingredients and concentrations of skin peel agents, there has been no standardization in the preparation of skin before application of the peeling agents, no standardization of the duration of skin contact with the peeling agents, no standardization of the degree of abrasiveness employed in the course of treatment, and no standardization of post-treatment for affected skin. The aforementioned lack of standardization has produced unpredictable results in the art of skin peeling/exfoliation.

As a general matter, skin to be peeled has been first cleansed in the prior art. In some prior art, there has also been another intermediate preparatory step in which various agents are applied to the skin in order to more effectively degrease it. After the skin is prepared by cleansing and/or degreasing, the peeling agents have been applied in the prior art. The peeling agents are then neutralized and/or removed after a non-standardized duration. Finally, affected skin has been topically treated with a moisturizer or other after-care preparation.

Additional disadvantages of the prior art have been the nonstandardization in the additional critical areas of variability in the effectiveness and depth of skin

penetration achieved by the skin peeling agents, due to uncontrolled variability in preparatory degreasing; variability in types and concentrations of peeling agents due to the presence or absence of solvents such as alcohol mixed with and applied with the peeling agents themselves; variability in the duration of peeling agent contact with the skin; variability in degree of abrasiveness employed in the course of skin peeling or exfoliation; and, variability in the materials, manner and frequency of post-peel skin treatment. There is also no way for a professional to know how much of the peeling agent to apply as the dose has not been premeasured or standardized.

OBJECTS OF THE INVENTION

It is an object of the present invention to provide a skin peeling/exfoliating system for at-home use.

It is an object of the present invention to provide a skin peeling/exfoliating system which eliminates the necessity for expensive inconvenient professional supervision for peeling or exfoliation skin treatment.

It is an object of the present invention to provide a skin peeling/exfoliating system involves frequented repeated application of peeling/exfoliating agents over a selected period of days to obtain predictable, reliable results.

It is an object of the present invention to provide a skin peeling/exfoliating treatment system treatment employing a skin peeling/exfoliating agent which comprises a unique combination of skin peeling/exfoliating materials.

It is an object of the present invention to provide a skin peeling/exfoliating treatment system employing a delivery system using cosmetic applicator pads and/or medicated applicator pads, preferably having a selected degree of abrasiveness.

It is an object of the present invention to provide a skin peeling/exfoliating treatment system employing a delivery system using cosmetic applicator pads and/or medicated applicator pads presaturated with a desired quantity of a skin peeling exfoliating agent.

It is an object of the present invention to provide a skin peeling/exfoliating treatment system employing a plurality of applicator pads saturated with materials for frequent periodic peeling/exfoliating steps which are also moisturizing steps.

It is an object of the present invention to provide a skin peeling/exfoliating treatment system which provides a method of treating and improving the appearance of skin subject to a variety of conditions, including aging skin, hyperpigmentation, acne, sensitive skin, dry-oily skin and the like.

It is an object of the present invention to provide a skin peeling/exfoliating treatment system wherein the skin peeling/exfoliating agent is left on the skin, and which, by the virtue of leaving it on, becomes a skin moisturizer.

It is an object of the present invention to provide a skin degreasing, skin peeling and/or exfoliating treatment system with a cosmetic and/or medicated applicator pad which provides an agent which is left on the skin, and which, by the virtue of leaving it on, serves as both a skin moisturizer and a treatment for the skin.

SUMMARY OF THE INVENTION

In addressing the problems found in the prior art, the present invention provides a method of treatment for skin conditions, including an abrasive and absorbent applicator pad, preferably in a kit for at home use, for delivery of a composition for effective skin peeling and exfoliation as well as moisturization which is applied in concentrations of the active skin peeling ingredients far lower than that routinely used in dermatologists' offices. In addition, if used at frequent periodic intervals, such as daily, over a period of a few weeks, the use of the composition, preferably applied with an applicator pad, provides a light at-home chemical skin peel. The composition of the present invention, preferably as delivered by the pad, provides an effective composition and method in that the controlled concentration of at least one peeling agent permits the

peeling agent to be left on the skin of the user for a relatively extensive duration.

It is to be noted that the peeling agents of the various embodiments of the present invention may be treatment compositions containing a single alpha hydroxy acid (AHA) or a combination of the AHAs as set forth in detail hereinafter.

Frequent periodic treatment of the skin and long-duration skin contact with the peeling agents effects the slow peeling results which are an object of the present invention. In addition, the efficacy of the present invention substantially avoids irritating or wounding the skin in a manner perceptible to the user is a further novel advantage.

Because the peeling/exfoliation treatment composition of the present invention is thus effective without skin irritation or wounding which is perceptible, the composition of the present invention may be, and is intended to be left upon the skin of the user without the neutralization or removal required in the prior art. Thus, the present invention is designed to be used at least once daily over a period of weeks to produce the same or a superior result compared to light or superficial chemical peels alone.

The alternate embodiment of the present invention is better than a cream containing AHAs and/or glycolic acid because the acetone in the alternate embodiment of the present invention acts as a further peeling agent in its own right and further acts as an aggressive solvent to strip the skin of oil and grease and thus allows the exfoliating agents to penetrate deeper. An exfoliating agent in a cream base treatment composition which fails to employ acetone cannot penetrate as deeply and thus cannot achieve the superior results of the present invention.

Thus, with the alternate acetone component of the present invention, the exfoliating agents penetrate deeper and are more effective in exfoliating the skin. The key novel aspects is the present invention's ability to deliver

the degreasing, exfoliating and moisturizing agents to the appropriate layers of skin where degreasing, exfoliating and moisturizing is to occur.

In contrast to the prior art which requires expensive and potentially inconvenient professional treatment for skin exfoliation, the present invention provides convenient and inexpensive skin degreasing, exfoliating and moisturizing at home, in a non-professional setting, utilizing treatment compositions containing exfoliating and/or degreasing or moisturizing agents applied only once per day over a period lasting a minimum of five days. Other differences between the present invention and the prior art will be fully set forth herein.

In addressing the aforementioned objects, the present invention provides a composition, a method of treatment and a treatment applicator pad for at-home skin exfoliating and/or degreasing or moisturizing, which is gentle in that the concentrations of the active skin exfoliating and/or degreasing or moisturizing ingredients are far lower than that utilized in the professional offices of dermatologists, cosmetologists and aestheticians.

The composition of the present invention is designed to be used at least once daily over a period of weeks to produce the same or a superior result compared to chemical peels available in an intense, harsh dermatological treatment lasting merely for a period of minutes or hours.

The present invention is better than prior art AHA containing creams or lotions because the use of the applicator pad debrides the skin, thereby providing better penetration of the skin layers by the AHAs. Better penetration, in turn, permits the slow peeling and/or exfoliating which is the object of using the AHAs. The use of at least one AHA with the applicator pad of the present invention provides a convenient, user-friendly product intended for at least once daily use in a non-professional setting, such as at the home of the user.

The pads themselves are effective in removing the dead skin debris, dirt and oil in that the pad removes these

materials. In addition, the applicator pad, which is presaturated with the AHA material, leaves the low-concentration AHA material on the skin while removing unwanted debris, dirt and oil. The clearing of debris, dirt and oil and simultaneous AHA topical application allows far greater AHA efficacy than if the AHAs were applied to dirty, unprepared skin. In addition, the pad enables greater AHA efficacy than if the skin had been simply cleansed prior to the application of the AHAs.

The pads themselves are commercially available flexible, absorbant, sponge-like cosmetic applicator pads which allow the presaturated AHAs to be expressed onto the skin with mild manual pressure and which also provide abrasion when drawn across the skin with mild to moderate manual pressure.

Mildly abrasive cosmetic applicator pads are commercially available under the name SONTARA pads, described as a non-woven/spun laced pad comprised of rayon and polyester from KLEEN TEST PRODUCTS, P.O. Box 574 Milwaukee, WI. Moderately abrasive cosmetic applicator pads, also available from KLEEN TEST PRODUCTS are described as NOVO pads.

Mildly abrasive and absorbant pads, e.g., SONTARA pads, are used for AHA preparations which have a relatively low-viscosity liquid or liquid-like pharmaceutical vehicle. The moderately abrasive NOVO pads can be used with the same relatively low-viscosity liquid or liquid-like pharmaceutical vehicle, but the NOVO pads can also be used with AHA preparations with higher viscosities, such as lotions, creams and lipid-based pharmaceutical vehicles.

Strongly abrasive pads, such as the BUFF PUFF pad can also be presaturated with AHAs in a pharmaceutical vehicle, but strongly abrasive applicators are not preferred in the present invention.

The above-mentioned cosmetic applicator pads may also be manufactured in a two-sided embodiment. One side has relatively greater abrasiveness and the remaining side is less abrasive. The more abrasive side of the pad is used

to debride the skin, loosening and removing dead skin cells and debris, while at the same time depositing a material with which the pad has been presaturated. Such material is typically, but not necessarily, the peeling and/or exfoliating agent of the present invention. The pad, presaturated with an alternate material, could be used to apply a cleanser or a skin degreasing composition.

The two-sided pad's less abrasive side is used to absorb dirt, skin oil and debris from the skin to be treated. The user first applies the more abrasive side of the two-sided pad by gently wiping the skin to be treated with mild manual pressure using several wiping strokes while carefully avoiding harsh irritating pressure.

When debriding is complete, after several gentle wiping strokes, the user would then apply the less abrasive side of the same pad in an additional series of gentle wiping strokes. The less abrasive side of the pad would absorb dirt, oil and debris from the skin to be treated which were debrided and loosened by wiping with the pad's more abrasive side.

The foregoing dual series of wiping strokes serves the additional function of depositing upon the skin to be treated the material with which the pad was presaturated. Typically, such material is the peeling and/or exfoliating agent of the present invention, or the degreaser composition, as more fully set forth elsewhere herein.

One of the most important novel features of the present invention derives from the fact that its concentrations of skin degreasing, exfoliating and/or moisturizing agents is drastically reduced compared to typical prior art compositions. As a consequence, the present invention produces the desired skin degreasing, exfoliating and moisturizing effects in a series of painless treatments.

Prior art professional skin peeling not done in the home has generally comprised the following sequence of steps (1) cleansing the skin; (2) application of an degreaser; (3) application of active skin peeling

materials; and (4) neutralizing or removal of the active skin peeling materials.

The present invention may utilize at least one of the four steps, but with novel and very significant modifications. An alternate modification may occur in step 2 with the use of (i) acetone in a home-use skin preparation material and (ii) in the selectability of the level of applicator pad abrasiveness. The novelty of step 3 may alternatively include (i) the use of acetone as a skin penetrating agent, and (ii) the combination of a skin degreasing, exfoliating and moisturizing agent composition with a moisturizing material, which material is applied to the skin to accomplish both gradual degreasing, exfoliating and moisturizing at the same time.

In addition to the foregoing aspects of novelty, in one embodiment of the present invention, the aforementioned conventional four steps may be accomplished in a novel manner. This alternate embodiment of the present invention provides that the treatment steps be performed by applying the given material by means of a cosmetic applicator pad pre-saturated with the given material for the respective steps 1-3, the pad further being selected to provide a desired level of abrasive efficiency.

While it is known to use applicator pads of special materials and construction to apply particular skin exfoliating preparations, such as salicylic acid, the prior art does not teach the use of cosmetic applicator pads with specific abrasive capabilities, as does the present invention. According to the present invention, applicator pads with varying degrees of abrasive efficiency are selectively provided in order to further control and vary the depth of penetration of the degreasing, exfoliating and/or moisturizing agents.

A given pad abrasion level may be selected from the categories of mild and moderate abrasiveness according to the present invention. Variation in applicator pad abrasiveness is achieved by selecting suitable materials for pad construction, such as cotton, nylon, polyester,

styrene and the like, singly or in combination. The pad may have an applicator surface which is of fibrous consistency or otherwise suitably textured with a blend of semi-rigid and soft materials for producing an abrasive effect for scraping, removing and degreasing action.

The penetration depth and effectiveness of the degreasing, exfoliating and/or moisturizing agents are affected by pad abrasiveness because a given level of pad abrasive capability results in mechanical exfoliation of dead skin, thus exposing underlying living skin tissue more effectively. By taking off the top layers of dead skin, the alternative skin degreaser, such as acetone, is allowed to work more effectively, providing a corresponding level of skin degreasing efficiency when the skin is wiped with the pad during the degreasing steps of treatment.

Pad abrasive efficiency thus controls the amount of natural oil and grease left upon skin which has been prepared for topical application of the degreasing, exfoliating and/or moisturizing agent. The greater the abrasive efficiency of the pad used for degreasing the skin, the deeper the degreasing, exfoliating and/or moisturizing agent will penetrate, thereby providing enhanced degreasing, exfoliating and moisturizing agent effectiveness.

The user of a pre-saturated cosmetic applicator pad for a process of at least once per day applications gains the convenience of being apply to accurately apply a quantity of each respective materials in the 3 steps. Thus predictable and desirable results are provided by the present invention, in contrast to the prior art.

When a cosmetological applicator pad is used with the composition of the present invention for use in the skin exfoliating process, the exfoliating agent is:

(a) applied to the skin;

(b) allowed to effect its exfoliating activity; and

(c) debris is removed from the skin at essentially the same time while leaving the composition of the present invention on the skin to be treated.

The result is a process very convenient for the user, particularly in an at-home setting. In comparison to the present invention, the prior art teaches nothing like the application of a peeling and/or exfoliating agent which is left on the skin and removal of skin cell debris.

An additional novel feature of the present invention is that the exfoliating and/or degreasing or moisturizing agents, once applied by the user, and left upon the skin for at least several hours.

It is not neutralized, nor is it removed, because it is a moisturizer. The present invention can be left on the skin due its low concentration of gentle exfoliating and/or moisturizing or degreasing agents. The present invention is intended to be used, preferably at night before retiring, so that the exfoliating and/or moisturizing or degreasing agents would be left in contact with the user's skin until, typically, washed off by normal bathing the next morning. The present invention can also be applied in the morning, and left on the skin all day.

In contrast, the prior art requires the application followed by the relatively quick neutralization or removal of exfoliating agents. This quick removal or neutralization is obviously necessary due to the high concentrations of exfoliating agents used in the prior art, with their attendant harshness and action deep within the skin and the wounding of living skin tissue.

Selecting the rate of skin degreasing, exfoliating and/or moisturizing during use is accomplished by varying, singly or in combination:

(a) applicator pad abrasivenss;

(b) degreaser composition, particularly with regard to the concentration of acetone therein;

(c) treatment composition containing the degreasing, exfoliating and moisturizing agents; and

(d) the number and frequency of treatments involving the aforementioned steps.

It has been found that keeping the concentrations of the exfoliating and/or moisturizing agents constant, and

varying the type and concentration of the alternative degreasing agent critically produces a change in the degreasing, exfoliating and/or moisturizing rate.

It is thought that this is so because a more effective degreaser, such as the alternative acetone component in the degreaser composition in relatively high concentration will be relatively more effective in removing skin surface oil, thereby more effectively exposing underlying skin to contact with the degreasing, exfoliating and moisturizing agents in the treatment composition.

Acetone has not been used in home skin treatment compositions in the prior art because it is far too harsh and produces far too much skin drying. Thus, the prior art has taught away from this critical novel feature of the present invention.

However, because of the gentle moisturizing effect of the glycolic acid in low concentrations in an applicator pad, in the alternate embodiment with acetone, the normally harsh effects of acetone are neutralized by the glycolic acid. Thus, one is able to use acetone, in spite of its harsh effects of use alone.

The degreasing, exfoliating and/or moisturizing agents thereupon penetrate the skin deeper and more effectively than if skin oils had been less efficiently removed. Also, substituting alcohol as a degreaser in place of all or a portion of acetone will affect, and thus control the rate of cleaning, since alcohol is a less efficient solvent for skin oil than is acetone. However, alcohol does not act as a skin peeling agent as does acetone.

The degreaser composition of the present invention, as elsewhere set forth, is typically a mixture of alcohol, acetone and water. The concentrations of the degreaser components in the degreaser composition can thus be varied to produce a desired rate of skin degreasing, exfoliating and moisturizing.

The present invention provides an applicator pad for treating skin conditions, such as aging skin, acne, hyperpigmentation, sensitive skin, and composite dry-oily

skin. Applicator pads for the respective degreasing and/or peeling steps are respectively saturated with a quantity of degreasing, and exfoliating and/or moisturizing agents.

Each day of the course of treatment in a non-professional setting the user applies the present invention's materials at a selected frequency, for example, at least once daily, for a selected duration of treatment, for example, for a specified number of days, preferably 14 days, as indicated for each skin condition treatment as follows:

In one embodiment, the skin is degreased by the user by applying a degreaser with an applicator pad presaturated with the degreasing material. The degreasing material according to the present invention is set forth more particularly in table 3 below. In particular, the degreaser contains acetone in an aqueous base, which may also contain alcohol.

The only necessary components of the peeling/exfoliating agent of the present invention are AHAs, or mixture thereof, of which the AHA is preferably glycolic acid, and alternatively acetone as a degreaser, exfoliant and moisturizer. The alpha hydroxy acids most effective for use in the present invention are glycolic acid, which is the preferred AHA, and lactic and pyruvic acids. These AHAs are not equivalent to each other, since glycolic acid is gentler and more effective than either lactic or pyruvic acids. In a further alternative embodiment, the addition of a small amount of salicylic acid may also be useful.

Lactic acid and pyruvic acid are harsher peeling and exfoliating agents than is glycolic acid. The use of lactic and pyruvic acids in a further alternative admixture with glycolic acid in some embodiments is a feature of the present invention, since the inclusion of lactic and/or pyruvic acids can accelerate the peeling/exfoliating action of the present invention. Other embodiments of the present invention, as set forth above, provide a AHA selected from

the group consisting of glycolic, lactic and pyruvic acids and mixtures thereof.

By varying both the absolute concentrations of the AHAs selected for a particular embodiment of the present invention, and/or selecting which AHAs and in which particular proportions they are to be used, a precisely controlled degree of peeling/exfoliating efficacy can be achieved.

Such controlled and precise peeling/exfoliating efficacy is an important novel feature of the present invention, since variations of the present invention will permit the user to select a peeling composition which has a particular combination of speed of peeling and harshness.

It is to be noted that while it is an object of the present invention to provide a peel for at home use which is both gradual and gentle, it is also necessary and important to vary and to control the speed with which the present invention achieves its results. Not only can speed and efficacy be controlled as described, but speed and efficacy can also be controlled by varying the frequency of user application.

Thus, if a user doubles the frequency of application, for example, applying the present invention twice daily instead of once daily, the speed and efficacy will naturally increase. However, it is once again emphasized that rapidity of peeling action is not an object of the present invention.

The following tables describe the peeling/exfoliating compositions provided in the present invention. As has been stated, the present invention provides low-concentrations of AHAs and alternate ingredients, such as acetone and salicylic acid in a cosmetic applicator pad. The AHAs are provided in a suitable pharmaceutical vehicle, which typically may be a composition according to the tables presented below. It will be understood that a suitable pharmaceutical vehicle is merely suggested by the non-AHA ingredients, and that other suitable pharmaceutical vehicles which contain AHAs may also be used.

In the following tables, the inert, or inactive ingredients, i.e., the ingredients not set forth above as being active agents of the present invention represent the composition of a preferred pharmaceutical vehicle for the AHAs of the present invention.

Furthermore, certain tables below show representative embodiments having specific combinations of AHAs. While the preferred embodiment of the present invention provides only glycolic acid as the AHA, it has been set forth above that lactic and/or pyruvic acids may also be included singly or in combination with each other and/or in combination with glycolic acid or optionally in combination with acetone and/or salicylic acid. It will be understood that tables below specifying combinations of the aforementioned AHAs are merely exemplary and are not intended to be exclusive or to limit the scope of the present invention.

The following tables describe the peeling/exfoliating compositions provided in the present invention as well as an alternative acetone-containing degreaser composition. As has been stated, the present invention provides low-concentrations of AHAs in a cosmetic applicator pad. The AHAs are provided in a suitable pharmaceutical vehicle, which typically may be a composition according to the tables presented below. It will be understood that a suitable pharmaceutical vehicle is merely suggested by the non-AHA ingredients, and that other suitable pharmaceutical vehicles which contain AHAs may also be used.

In the following tables, the inert, or inactive ingredients, i.e., the ingredients not set forth above as being active agents of the present invention represent the composition of a preferred pharmaceutical vehicle for the AHAs of the present invention.

Furthermore, the alternative acetone degreaser composition is separately provided in a presaturated cosmetic applicator pad to be used prior to and separately from the cosmetic applicator pad saturated with the gentle

peeling and/or exfoliating composition of the present invention.

Furthermore, certain tables below show representative embodiments of the treatment composition having specific combinations of AHAs, and optionally, acetone and/or salicylic acid. It has been set forth above that lactic and/or pyruvic acids may also be included singly or in combination with each other and/or in combination with glycolic acid and optionally with acetone and/or salicylic acid. It will be understood that tables below specifying combinations of the aforementioned AHAs are merely exemplary and are not intended to be exclusive or to limit the scope of the present invention.

Table 1

Composition Showing the AHAs of the Present Invention With Non-AHA Materials Comprising An Exemplary Preferred Pharmaceutical Vehicle

Materials are listed by Weight Percentages

Material	From About	To About
Disodium EDTA	0.0	0.3%
Sodium Benzoate	0.0	0.4%
Witch Hazel E02	0.0	98%
Polysorbate-20	0.0	10%
Alpha hydroxy acid	An effective amount	20%
Ammonia, dissolved	0.0	5%
Germall 115	0.0	0.5%
Acetone	0.0	10%
Alcohol	0.0	98%
Purified Water	Balance of Composition	100.0%

Table 2

Composition for Exfoliating and Moisturizing Agents of the Present Invention Showing Preferred Concentrations of AHAs

Materials are listed by Weight Percentages

Material	Preferably From About	To About
Disodium EDTA	0.080%	0.13%
Sodium Benzoate	0.15%	0.3%
Witch Hazel E02	1%	5%
Polysorbate-20	0.5%	2.5%

Alpha hydroxy acid	3.0%	7.5%
Ammonia, dissolved	0.3%	1%
Germall 115	0.15%	0.3%
Acetone	0.25%	4.0%
Alcohol	2.5%	7.5%
Purified Water	Balance of Composition to	100%

Table 3

Preferred Alternative Degreaser Composition

Materials are listed by Weight Percentages

Material	From About	To About
Witch Hazel	0.0%	25%
Propylene Glycol	0.0%	25%
Camphor	0.0%	5%
Acetone	0.1%	10%
Alcohol	0.0%	80%
Sodium Borate	0.0%	1%
Purified Water	Balance of Composition	100.0%

Table 4

Degreaser Composition Preferred Acetone Concentrations

Materials are listed by Weight Percentages

	Preferably From About	To About
Witch Hazel	1%	3%
Propylene Glycol	1%	6%
Camphor	0.01%	0.75%
Acetone	1%	7%
Alcohol	30%	65%
Sodium Borate	0.01%	0.75%
Purified Water	Balance to	100.0%

Tables 5-8 below show specific exemplary embodiments of the present invention. Tables 5-8 are based upon Table 1, varying only in that specific AHAs are shown and are not intended to limit the scope of the present invention. Furthermore, preferred concentration ranges are shown in Table 2 above, and these preferred concentrations apply to Tables 5-8 below.

Table 5

Composition Showing Glycolic Acid as the AHA of the Present Invention With Non-AHA Materials Comprising An Exemplary Preferred Pharmaceutical Vehicle

Materials are listed by Weight Percentages

Material	From About	To About
Disodium EDTA	0.0	0.3%
Sodium Benzoate	0.0	0.4%
Witch Hazel E02	0.0	98%
Polysorbate-20	0.0	10%
Glycolic acid	An effective amount	20%
Ammonia, dissolved	0.0	5%
Germall 115	0.0	0.5%
Acetone	0.0	10%
Alcohol	0.0	98%
Purified Water	Balance of Composition	100.0%

Table 6

Composition Showing Glycolic Acid Admixed with Lactic Acid as an Example of an AHA Combination of the Present Invention With Non-AHA Materials Comprising An Exemplary Preferred Pharmaceutical Vehicle

Materials are listed by Weight Percentages

Material	From About	To About
Disodium EDTA	0.0	0.3%
Sodium Benzoate	0.0	0.4%
Witch Hazel E02	0.0	98%
Polysorbate-20	0.0	10%
Mixed glycolic and lactic acids	An effective amount	20%
Ammonia, dissolved	0.0	5%
Germall 115	0.0	0.5%
Acetone	0.0	10%
Alcohol	0.0	98%
Purified Water	Balance of Composition	100.0%

Table 7

Composition Showing Glycolic Acid Admixed with Pyruvic Acid as an Example of an AHA Combination of the Present Invention With Non-AHA Materials Comprising An Exemplary Preferred Pharmaceutical Vehicle

Materials are listed by Weight Percentages

Material	From About	To About
Disodium EDTA	0.0	0.3%
Sodium Benzoate	0.0	0.4%
Witch Hazel E02	0.0	98%
Polysorbate-20	0.0	10%
Mixed glycolic and pyruvic acids	An effective amount	20%
Ammonia, dissolved	0.0	5%
Germall 115	0.0	0.5%
Acetone	0.0	10%
Alcohol	0.0	98%
Purified Water	Balance of Composition	100.0%

Table 8

Composition Showing Glycolic Acid Admixed with Lactic and Pyruvic Acids as an Example of an AHA Combination of the Present Invention With Non-AHA Materials Comprising An Exemplary Preferred Pharmaceutical Vehicle

Materials are listed by Weight Percentages

Material	From About	To About
Disodium EDTA	0.0	0.3%
Sodium Benzoate	0.0	0.4%
Witch Hazel E02	0.0	98%
Polysorbate-20	0.0	10%
Mixed glycolic and lactic and pyruvic acids	An effective amount	20%
Ammonia, dissolved	0.0	5%
Germall 115	0.0	0.5%
Acetone	0.0	10%
Alcohol	0.0	98%
Purified Water	Balance of Composition	100.0%

In the degreaser composition, the concentrations of the acetone, alcohol and acetone may be varied, since the acetone is an aggressive solvent for removing residual oils on the skin and also acts as a peeling agent in its own right. The higher the acetone concentration, the more rapidly the composition of the present invention will achieve its results.

By reducing th alternative acetone concentration in relation to the relative proportions of alcohol and/or water in the degreaser, in view of the fact that neither alcohol nor water act as skin peeling agents, a gentler degreasing effect is achieved. In addition, the peeling effect of the acetone present in the degreaser will correspondingly be controlled and reduced as the acetone concentration is reduced.

Use of the present invention is accomplished by wiping with mild manual pressure a cosmetic applicator pad presaturated with at least one AHA composition over the skin to be treated. The applicator pad debrides the skin of dead skin, dead skin cell debris, dirt, and oil, all of which are removed by and remain upon the pad. As the pad is wiped across the skin to be treated, the mild manual pressure expresses the AHA composition and deposits the same topically upon the skin. Because the skin has been debrided and prepared by removal of debris dirt and oil, the AHAs are permitted access to penetrate the skin and thus to accomplish their peeling and/or exfoliating activity.

With or without an alternative first step of degreasing, as set forth above, the next step is the application to the skin of exfoliating and/or peeling material according to the present invention. The peeling agent is applied with an applicator pad presaturated therewith applied to the skin to be treated. The applicator pad is provided with a preselected level of abrasiveness selected from the group consisting of mild abrasiveness, moderate abrasiveness and strong abrasiveness.

The user exercises care in the application of moderate manual pressure to the applicator pad as it passes over the skin to be treated so as to provide a mild and/or moderate abrading of said skin.

The preferred embodiment of the composition of the present invention is presented in Table 9 below. Table 10 sets forth preferable concentrations. The preferred

embodiment comprises the AHA glycolic acid combined with acetone and inert ingredients. The inert or inactive ingredients provide a suitable pharmaceutical base for the peeling agents, but do not provide a skin peeling or exfoliating action. The inert ingredients may be substituted with equivalent materials for producing a suitable pharmaceutical base.

However, since the only necessary components are glycolic acid as a degreaser, exfoliant and/or moisturizer, and alternatively acetone as a degreaser, the composition may be also defined as in the alternate range shown in Table 9 below, or as in an alternate preferred composition as in Table 10 below.

Table 9

Alternate Composition for Exfoliating and Moisturizing Agents of the Present Invention

Materials are listed by Weight Percentages

Material	From About	To About
Alpha hydroxy acid	An effective amount	20%
Acetone	0.0	10%
Alcohol	0.0	98%
Purified Water	Balance of Composition to	100.0%

Table 10

Alternate Composition for Exfoliating and Moisturizing Agents of the Present Invention Preferred Concentrations

Materials are listed by Weight Percentages

Material	Preferably From About	To About
Alpha hydroxy acid	An effective amount	7.5%
Acetone	0.0%	10%
Alcohol	0.0	98%
Purified Water	Balance of Composition to	100%

The present invention provides respective kit assemblies for treating the respective skin conditions set forth above. Each respective kit assembly includes an effective and convenient instructional means, such as an instructional pamphlet or a videotape or other instructional means containing thereon indicia for administration of sequentially applied components according

to steps needed for the respective skin condition to be treated.

The kit assembly also provides a sequential dispenser means containing a plurality of daily sets of kit sub-assembly components, such as a series of jars containing a supply of presaturated applicator pads having, respectively, cleanser, degreaser and peeling agent therein. In addition, kits are provided with containers such as bottles or tubes of other non-pad-requiring ingredients for the respective skin conditions, such non-pad-requiring materials being, for example, a moisturizer, a sun screen, etc as more fully set forth below. In addition to respective kits being specific for treatment of each aforementioned skin condition, kits are further respectively specific with regard to whether a given kit is to be used for the therapeutic phase or, in the alternative, for the maintenance phase.

Generally, and except as set forth for specific skin conditions in more detail below, each kit provided in the present invention has sub-assembly components including therein the following:

a. a step 1 container including a supply of applicator pads saturated with a premeasured quantity of a non-soaping non-detergent cleanser lotion; the supply includes two such pads for each day of intended use, one for a morning use and one for an evening use e.g., 14 step-1 pads for 7 days of intended use, for example, in the therapeutic phase.

Since the maintenance phase is intended to be used following the preferably 7-day therapeutic phase, and to provide daily maintenance treatments for one month, the corresponding maintenance kit would preferably contain 60 step-1 cleansing pads for 30 days of intended twice-daily maintenance treatments. The remaining saturated pad descriptions below are similarly intended to be understood to apply, respectively to a preferably therapeutic phase of 7 days and a preferably maintenance phase of 30 days.

b. a step-2 container including a supply of applicator pads saturated with a premeasured quantity of degreaser.

c. a step-3 container including a supply of applicator pads saturated with a premeasured quantity of peeling/exfoliating exfoliating agent.

d. a step-4 container such as a tube or bottle containing a post-treatment moisturizing and anti-inflammatory material.

e. a step-5 container such as a tube or bottle containing a moisturizing sun screen material.

f. for certain skin conditions, a suitable step 6 container such as a tube or bottle with a required material, as detailed below.

Each day of the course of treatment, one component of the kit assembly is used for both applying and removing the agents in a non-professional setting according to the aforementioned steps, which are performed at selected periodic intervals, e.g., once daily by the user as directed by the instructions for the particular kit for the particular respective skin condition for the particular respective number of days of that kit's embodiment [e.g., 7-day therapy phase treatment kit for aging skin]. The step-wise procedure employed by the user is generally described in further detail as follows:

a. step 1 - cleansing the skin to be treated with a non-soaping non-detergent cleanser lotion applied with an applicator pad having a preselected level of abrasiveness, said pad being wiped across the skin to be treated with mild manual pressure;

b. step 2 - applying a suitable degreasing agent to degrease the skin to be treated, the degreasing agent being applied with an applicator pad having a preselected level of abrasiveness and the pad being presaturated with a measured quantity of degreasing agent in the manner set forth in step "a";

c. step 3 - applying to the skin to be treated a composition of mild skin peeling agents of a composition

elsewhere described herein, with an applicator pad presaturated with a measured quantity of said skin peeling agents in the manner set forth in step "a", the user exercising care in the application of moderate manual pressure to the applicator pad as it passes over the skin to be treated so as to provide a mild abrading of said skin; and

d. step 4 - applying a suitable moisturizing anti-inflammatory cream to the skin to be treated.

e. step 5 - applying a special sun screen.

The present invention provides three types of moisturizing sun screens.

Type 1 - employs a hydro-alcoholic gel for acne patients, because this is a drying-type sun screen.

Type 2 - employs a rich moisturizing sun screen for the photo aging skin and aging skin.

Type 3 - employs a bleaching agent - hydroquinone - for hyperpigmented and darkly pigmented skin.

Skin bleaching is separately provided by the present invention as a separate step for the pigmented skin, i.e., hyperpigmented skin and darkly pigmented skin. Bleaching would be done by applying a hydroquinone bleach-containing material in the evening. The hydroquinone bleach, as described in more detail below, is applied after the peeling agent has been applied and before the moisturizer is applied. Thus, the peeling/exfoliating exfoliating agent, the hydroquinone bleach, and the moisturizer are all left on the skin to be treated all night long.

The present invention provides two types of anti-inflammatory moisturizer materials. Both have hydrocortisone in them.

Type 1 - anhydrous preparation employed for aging skin.

Type 2 - hydrous preparation used for all other skin types.

The skin peeling/exfoliating exfoliating agents provided in step 3 of the present invention include low concentrations of, preferably, acetone, glycolic acid,

salicylic acid, and lactic acid according to the Tables set forth below. In an alternate embodiment, a low-concentration quantity of resorcinol is provided as a peeling/exfoliating exfoliating agent in combination with the aforementioned preferable peeling agents. The preferred embodiment of the composition of the peeling/exfoliating exfoliating agent of the present invention is presented in Table 1 below, and the alternate embodiment composition containing resorcinol is presented in Table 2 below. Tables 1.1 and 2.1, respectively, set forth ranges and preferable concentrations for the therapeutic phase of the present invention, namely the 15-2-2 peeling/exfoliating exfoliating composition. 15-2-2 refers to preferably 15% glycolic acid, 2% lactic acid and 2% salicylic acid. The Maintenance phase preferably utilizes 5-2-2, i.e., one-third the concentrations of the aforementioned peeling/exfoliating exfoliating agents. The compositions and concentrations of the maintenance phase peeling/exfoliating exfoliating agents are not here set forth because they are the same as those set forth in Tables 1, 1.1, 2, and 2.1, except that, instead of the 15-2-2 composition, the maintenance phase uses a 5-2-2 composition.

Table 11

Composition of Peeling/exfoliating exfoliating Agents of an Embodiment of the Therapeutic Phase of the Present Invention

Materials are listed by Weight Percentages

Material	From About	To About
Disodium EDTA	0.0%	0.3%
Sodium Benzoate	0.0%	1.0%
Witch Hazel E02	0.0%	20%
Polysorbate-20	0.0%	25%
Salicylic acid USP	0.1%	5%
lactic acid USP	0.1%	20%
Glycolic acid	0.1%	20%
Ammonia, dissolved	0.0%	35%
Germall 115	0.0%	1.0%

Acetone	0.1%	10%
Alcohol	0.0%	50%
Water Balance of Composition		100.0%

Table 12

Composition of Peeling/exfoliating exfoliating Agents of an Embodiment of the Therapeutic Phase of the Present Showing Preferred Concentrations

Materials are listed by Weight Percentages

Material	Preferably About
Disodium EDTA	0.1%
Sodium Benzoate	0.2%
Witch Hazel E02	2.5%
Polysorbate-20	1.0%
Salicylic acid USP	2.0%
Lactic acid USP	2.0%
Glycolic acid	15.0%
Ammonia, dissolved	6.0%
Germall 115	0.2%
Acetone	5.0%
Alcohol	5.0%

Purified Water Balance of Composition to 100%

Table 13

Composition of Peeling/exfoliating exfoliating Agents of an Alternate Embodiment of the Therapeutic Phase of the Present Invention With Resorcinol

Materials are listed by Weight Percentages

Material	From About	To About
Disodium EDTA	0.0%	0.3%
Sodium Benzoate	0.0%	1.0%
Witch Hazel E02	0.0%	20%
Polysorbate-20	0.0%	25%
Salicylic acid USP	0.1%	5%
Lactic acid USP	0.1%	20%
Glycolic acid	0.1%	20%
Resorcinol	0.1%	10%
Ammonia, dissolved	0.%	35%
Germall 115	0.0%	1.0%
Acetone	0.1%	10%

Alcohol	0.0%	50%
Water Balance of Composition		100.0%

Table 14

Composition of Peeling/exfoliating exfoliating Agents of an Alternate Embodiment of the Therapeutic Phase of the Present Invention With Resorcinol

Same As Table 2, Showing Preferred Concentrations

Materials are listed by Weight Percentages

Material	Preferably About
Disodium EDTA	0.1%
Sodium Benzoate	0.2%
Witch Hazel E02	2.5%
Polysorbate-20	1.0%
Salicylic acid USP	2.0%
Lactic acid USP	2.0%
Glycolic acid	15.0%
Resorcinol	2.0%
Ammonia, dissolved	6.0%
Germall 115	0.2%
Acetone	5.0%
Alcohol	5.0%
Purified Water Balance to	100.0%

Table 15

Composition of Degreaser Composition of the Present Invention

Materials are listed by Weight Percentages

Material	From About	To About
Witch Hazel	0.0%	25%
Propylene Glycol	0.0%	25%
Camphor	0.0%	5%
Acetone	0.1%	10%
Alcohol	1.0%	80%
Sodium Borate	Trace	1%
Water Balance of Composition		100.0%

Table 16

Composition of Step 2 - Degreaser Composition of the Present Showing Preferred Concentrations

Materials are listed by Weight Percentages

Material	Preferably About
Witch Hazel	2.5%
Propylene Glycol	3.0%
Camphor	0.1%
Acetone	5.0%
Alcohol	51%
Sodium Borate	0.1%
Purified Water	Balance to 100.0%

The following specific compositions are provided for treatment of the respective skin conditions. For example, in the therapy phase of acne treatment, step 1 cleanser is listed as provided in saturated pads in a 2 ounce quantity. In like manner, all other listed component quantities are similarly divided evenly into subquantities for pad saturation for the relevant number of days.

It should be noted that, for the treatment of hyperpigmented skin and darkly pigmented skin, there are 6 steps provided, the sixth step being application of a sun screen in the morning and the fifth step being application of a moisturizer and anti-inflammatory combination in the evening. The active anti-inflammatory ingredient of the present invention is hydrocortisone. As set forth above, the individual treatments of the respective skin conditions in some cases require more than four steps. In addition, there is a separate morning and evening treatment for each respective skin condition. The individual skin conditions are treated generally as follows.

Aging and Photo-Aging Skin - Therapy Phase

1. Cleansing twice daily is accomplished with a soap-free cleansing lotion designed to cleanse efficiently without excessive drying or irritation of the skin. A cleanser such as DEA lauryl sulfate in an emollient base and is used twice per day.

2. The degreaser is applied to deep clean the skin and remove excess sebum, which may reduce the effectiveness of the treatment pads. The degreaser is a hydro-alcoholic solution containing acetone in the concentration range of 0.1% to 10% but preferably 5% .

3. 15-2-2 Treatment Pads contain the peeling/exfoliating agent combination glycolic acid [preferably 15%, but over the possible range of 1-20%], salicylic acid [preferably 2%, but over the possible range of 0.1% to 5%], and lactic acid [preferable 2%, but over a possible range of 0.1% to 20%]. The 15-2-2 combination works synergistically with acetone as a peeling agent [preferably 5% but over the possible range of 0.1% to 10%]. The peeling/exfoliating agent combination is provided in a penetrating hydro-alcoholic vehicle containing acetone as a co-solvent to insure proper delivery of the peeling/exfoliating agent to the skin area to be treated. See Tables 1 and 2 for compositions and concentration ranges.

4. After the peeling/exfoliating treatment, the hydrocortisone balm for night-time use only is applied, containing the well-known anti-inflammatory and anti-pruritic drug hydrocortisone in the concentration range 0.1% to 2.5%, preferably 1%, in an anhydrous base.

5. A moisturizing sun screen is provided for morning application and day-time use to replenish moisture to the skin and maintain the moisture balance of the skin. The moisturizing sun screen is further provided with broad spectrum UV screens [i.e., screens for UVA and UVB] for protection from sunlight after therapy. The moisturizing sun screen contains octyl methoxycinnamate in the concentration range of 1.5% - 7.5%, preferably 7.5% and benzophenone-3 in the range from 0.1% to 6%, preferably 4%.

Aging Skin and Photo-Aging - Maintenance Phase

1. Cleansing twice daily is accomplished with a soap-free cleansing lotion designed to cleanse efficiently without excessive drying or irritation of the skin. A cleanser such as DEA lauryl sulfate in an emollient base and is used twice per day.

2. The degreaser is applied twice daily to deep clean the skin and remove excess sebum, which may reduce the effectiveness of the treatment pads. The degreaser is a hydro-alcoholic solution containing acetone in the concentration range of 0.1% to 10% but preferably 5% .

3. Gentle twice daily peeling/exfoliation is accomplished by the use of the 5-2-2 treatment pad during the maintenance phase. The 5-2-2 pad contains glycolic acid [preferably 5%, but over a possible range of 1-20%], salicylic acid [preferably 2%, but over a possible range of 0.1% to 5%], and lactic acid [preferably 2%, but over a possible range of 0.1% to 20%]. The peeling/ exfoliating agent combination is carried in a penetrating hydro-alcoholic vehicle containing acetone in the concentration range of 0.1% to 10% but preferably 5% as a co-solvent to insure proper delivery of the peeling/ exfoliating agent to the skin area to be treated. See Tables 1 and 2 for compositions and concentration ranges.

4. After the peeling/exfoliating step, the hydrocortisone balm is applied at night time, containing the well-known anti-inflammatory and anti-pruritic drug hydrocortisone in the concentration range 0.1% to 2.5% , preferably 1% in a hydrous base.

5. A moisturizing sun screen is provided for morning application and day-time use to replenish moisture to the skin and maintain the moisture balance of the skin. The moisturizing sun screen is further provided with broad spectrum UV screens [i.e., screens for UVA and UVB] for protection from sunlight after therapy. The moisturizing sun screen contains octyl methoxycinnamate in the concentration range of 1.5% - 7.5%, preferably 7.5% and benzophenone-3 in the range from 0.1% to 6%, preferably 4%.

Sensitive Skin - Therapy Phase

For sensitive skin, the therapy phase is comprised of the following steps:

1. Cleansing is accomplished with a soap-free cleansing lotion designed to cleanse efficiently without excessive drying or irritation of the skin. A cleanser such as DEA lauryl sulfate in an emollient base and is used twice per day.

2. The skin is degreased gently, without excessive abrasion or further use of detergents or solvents. The skin further cleansed using ultra pure rehydrated aloe vera

juice and a blend of sodium PCA and other humectants, such as methyl glyceth-20 in a water-based vehicle.

3. 15-2-2 Treatment Pads contain the peeling/exfoliating agent combination glycolic acid [preferably 15%, but over the possible range of 1-20%], salicylic acid [preferably 2%, but over the possible range of 0.1% to 5%], and lactic acid [preferable 2%, but over a possible range of 0.1% to 20%]. The peeling/exfoliating agent combination is provided in a penetrating hydro-alcoholic vehicle containing acetone as a co-solvent to insure proper delivery of the peeling/exfoliating agent to the skin area to be treated. The 15-2-2 combination works synergistically with acetone as a peeling agent [preferably 5% but over the possible range of 0.1% to 10%]. See Tables 1 and 2 for compositions and ranges.

The penetrating effect refers to the ability of the vehicle to cause deep, even dispersion throughout the skin. A hydro-alcoholic vehicle is one containing both water and alcohol, comprising a two-solvent system.

4. The therapeutic balm, which is applied twice daily contains the well-known anti-inflammatory and anti-pruritic drug hydrocortisone in the range of 0.1% to 2.5% in a hydrous base. The therapeutic balm serves to promote hydration and reduce inflammation to increase user comfort, as may be needed with frequent treatment of sensitive skin.

5. Moisturization and Ultraviolet light [UV] protection is provided for morning and daytime use on sensitive skin by applying a quick absorbing oil free emulsion which is light in consistency and does not have a heavy or oily base. Broad spectrum [UVA and UVB] protection is provided without the use of oxybenzone, lanolins, glycols, etc. The UV filters are Octyl Methoxycinnamate in the range of 1.5% to 7.5% and Menthyl Anthranilate in the range of 1% to 10% and the oil-free emulsion itself is a water-based emulsion comprised of a water-based vehicle and an ester-based emollient phase.

Sensitive Skin - Maintenance Phase

For sensitive skin, the Maintenance phase is comprised of the following:

1. Soap-free cleansing twice daily is done during the maintenance phase. Cleansing is accomplished with a soap-free cleansing lotion as in the therapy phase, the cleanser being designed to cleanse efficiently without excessive drying or irritation of the skin.

2. The skin is degreased gently twice daily, without excessive abrasion or further use of detergents or solvents. The skin further cleansed using ultra pure rehydrated aloe vera juice and a blend of sodium PCA and other humectants, such as methyl glyceth-20 in a water-based vehicle.

3. Gentle twice daily peeling/exfoliation is accomplished by the use of the 5-2-2 treatment pad during the maintenance phase. The 5-2-2 pad contains glycolic acid [preferably 5%, but over a possible range of 1-20%], salicylic acid [preferably 2%, but over a possible range of 0.1% to 5%], and lactic acid [preferably 2%, but over a possible range of 0.1% to 20%]. The peeling/ exfoliating agent combination is carried in a penetrating hydro-alcoholic vehicle containing acetone in the concentration range of 0.1% to 10% as a co-solvent to insure proper delivery of the peeling/ exfoliating agent to the skin area to be treated. The 5-2-2 combination works synergistically with acetone as a peeling agent [preferably 5% but over the possible range of 0.1% to 10%]. See Tables 1 and 2 for compositions and concentration ranges.

4. After the peeling/exfoliating treatment, the therapeutic hydrocortisone balm is applied, containing the well-known anti-inflammatory and anti-pruritic drug hydrocortisone in the concentration range 0.1% to 2.5% but preferably 1%, in a hydrous base.

5. Sun protector is applied in the morning for day time use via quick absorbing, oil-free emulsion for sensitive skin. Broad spectrum [UVA and UVB] protection is provided without the use of oxybenzone, lanolins, glycols, etc. The UV filters are Octyl Methoxycinnamate in the

range of 1.5% to 7.5% and Menthyl Anthranilate in the range of 1% to 10% and the oil-free emulsion itself is a water-based emulsion comprised of a water-based vehicle and an ester-based emollient phase.

Acne Treatment - Therapy Phase

1. Cleansing twice daily is accomplished with a soap-free cleansing lotion designed to cleanse efficiently without excessive drying or irritation of the skin. A cleanser such as DEA lauryl sulfate in an emollient base and is used twice per day.

2. The degreaser is applied to deep clean the skin and remove excess sebum, which may reduce the effectiveness of the treatment pads. The degreaser is a hydro-alcoholic solution containing acetone in the concentration range of 0.1% to 10% but preferably 5% .

3. 15-2-2 Treatment Pads contain the peeling/exfoliating agent combination glycolic acid [preferably 15%, but over the possible range of 1-20%], salicylic acid [preferably 2%, but over the possible range of 0.1% to 5%], and lactic acid [preferable 2%, but over a possible range of 0.1% to 20%]. The peeling/exfoliating agent combination is provided in a penetrating hydro-alcoholic vehicle containing acetone as a co-solvent to insure proper delivery of the peeling/exfoliating agent to the skin area to be treated. The 15-2-2 combination works synergistically with acetone as a peeling agent [preferably 5% but over the possible range of 0.1% to 10%]. See Tables 1 and 2 for compositions and concentration ranges.

4. A hydrocortisone moisturizer therapeutic balm is applied which is used at night time. This material uses the well-known anti-inflammatory hydrocortisone in a water-based emulsion.

5. A gel containing a topical acne preparation or group of preparations such as benzoyl peroxide is then applied in the morning, but not at night. Appropriate directions are provided in the kit of the present invention. The use of benzoyl peroxide to treat acne is

well documented. This gel provides benzoyl peroxide U.S.P. in a non-irritating water based gel.

6. An acne treatment UV screen for morning application and daytime use is provided to reduce the user's UV exposure. The acne UV screen is a non-comedogenic, oil-free preparation containing octyl methoxycinnamate in the concentration range of 1.5% - 7.5% , preferably 7.5%; homosalate 1-10%, preferably 5%; octyl salicylate 1.5-5%, preferably 5%; and benzophenone-3 in the range from 0.1% to 6%, preferably 4% to provide broad spectrum UVA and UVB protection in a hydro-alcoholic base. The user is instructed to use the acne UV screen liberally, i.e., to totally cover the area of therapy with the UV screen.

Acne Treatment - Maintenance Phase

1. An antiseptic acne cleanser is provided which contains mild detergents to cleanse the skin and remove excess oil. The user is instructed to cleanse the skin at regular periodic intervals, preferably twice per day.

2. Gentle twice daily peeling/exfoliation is accomplished by the use of the 5-2-2 treatment pad during the maintenance phase. The 5-2-2 pad contains glycolic acid [preferably 5%, but over a possible range of 1-20%], salicylic acid [preferably 2%, but over a possible range of 0.1% to 5%], and lactic acid [preferably 2%, but over a possible range of 0.1% to 20%]. The peeling/exfoliating agent combination is carried in a penetrating hydro-alcoholic vehicle containing acetone in the concentration range of 0.1% to 10% as a co-solvent to insure proper delivery of the peeling/exfoliating agent to the skin area to be treated. The 5-2-2 combination works synergistically with acetone as a peeling agent [preferably 5% but over the possible range of 0.1% to 10%]. See Tables 1 and 2 for compositions and concentration ranges.

3. A gel containing a topical acne preparation or group of acne preparations, such as benzoyl peroxide is then applied twice daily in the morning, and at night, as per kit instructions.

4. An acne treatment UV screen for morning application and daytime use is provided to reduce the user's UV exposure. The acne UV screen is a non-comedogenic, oil-free preparation containing octyl methoxycinnamate in the concentration range of 1.5% - 7.5% , preferably 7.5%; homosalate 1-10%, preferably 5%; octyl salicylate 1.5-5%, preferably 5%; and benzophenone-3 in the range from 0.1% to 6%, preferably 4% to provide broad spectrum UVA and UVB protection in a hydro-alcoholic base. The user is instructed to use the acne UV screen liberally, i.e., to totally cover the area of therapy with the UV screen.

5. Evening-use Hydrocortisone Moisturizer therapeutic balm - this material uses the well-known anti-inflammatory hydrocortisone in a water-based emulsion.

Hyper Pigmented Skin and Darkly Pigmented Skin - Therapy Phase

1. Cleansing twice daily is provided by the soap-free cleanser during the maintenance phase. Cleansing is accomplished with a soap-free cleansing lotion as in the therapy phase, the cleanser being designed to cleanse efficiently without excessive drying or irritation of the skin.

2. The degreaser is applied to deep clean the skin and remove excess sebum, which may reduce the effectiveness of the treatment pads. The degreaser is a hydro-alcoholic solution containing acetone in the concentration range of 0.1% to 10% but preferably 5% .

3. 15-2-2 Treatment Pads contain the peeling/exfoliating agent combination glycolic acid [preferably 15%, but over the possible range of 1-20%], salicylic acid [preferably 2%, but over the possible range of 0.1% to 5%], and lactic acid [preferable 2%, but over a possible range of 0.1% to 20%]. The peeling/exfoliating agent combination is provided in a penetrating hydro-alcoholic vehicle containing acetone as a co-solvent to insure proper delivery of the peeling/exfoliating agent to the skin area to be treated. The 15-2-2 combination works

synergistically with acetone as a peeling agent [preferably 5% but over the possible range of 0.1% to 10%]. See Tables 1 and 2 for compositions and concentration ranges.

4. Hydroquinone screen cream is provided for application to areas of hyperpigmentation or generally to darkly pigmented skin at a selected interval, between two and four times daily, preferably three times. An alternate embodiment includes a hydro-alcoholic vehicle at night with the hydroquinone screen used in the morning. This hydroquinone screen cream contains hydroquinone in the range of 0.1% to 2%, preferably 2% as a skin bleach in a non-comedogenic water based emulsion. Also provided in the hydroquinone screen cream is a broad spectrum [UVA and UVB] sunscreen, preferably octylmethoxycinnamate, and preferably about 7.5% and benzophenone-3, preferably about 1.5%. and emollients and moisturizers .

5. Therapeutic balm for night-time use. After the peeling/ exfoliating treatment, the therapeutic hydrocortisone balm is applied at night time, containing the well-known anti-inflammatory and anti-pruritic drug hydrocortisone in the concentration range 0.1% to 2.5% , preferably 1% in a hydrous base.

6. Moisturization and Ultraviolet light [UV] protection is provided for sensitive skin by applying a quick absorbing oil free emulsion which is light in consistency and does not have a heavy or oily base. Broad spectrum [UVA and UVB] protection is provided without the use of oxybenzone, lanolins, glycols, etc. The UV filters are Octyl Methoxycinnamate in the range of 1.5% to 7.5% and Menthyl Anthranilate in the range of 1% to 10% and the oil-free emulsion itself is a water-based emulsion comprised of a water-based vehicle and an ester-based emollient phase.

Hyper Pigmented Skin and Darkly Pigmented Skin - Maintenance Phase

1. Cleansing twice daily is provided by the soap-free cleanser during the maintenance phase. Cleansing is accomplished with a soap-free cleansing lotion as in the therapy phase, the cleanser being designed to cleanse

efficiently without excessive drying or irritation of the skin.

2. The degreaser is applied twice daily to deep clean the skin and remove excess sebum, which may reduce the effectiveness of the treatment pads. The degreaser is a hydro-alcoholic solution containing acetone in the concentration range of 0.1% to 10% but preferably 5% .

3. Gentle twice daily peeling/exfoliation is accomplished by the use of the 5-2-2 treatment pad during the maintenance phase. The 5-2-2 pad contains glycolic acid [preferably 5%, but over a possible range of 1-20%], salicylic acid [preferably 2%, but over a possible range of 0.1% to 5%], and lactic acid [preferably 2%, but over a possible range of 0.1% to 20%]. The peeling/exfoliating agent combination is carried in a penetrating hydro-alcoholic vehicle containing acetone in the concentration range of 0.1% to 10% as a co-solvent to insure proper delivery of the peeling/ exfoliating agent to the skin area to be treated. The 5-2-2 combination works synergistically with acetone as a peeling agent [preferably 5% but over the possible range of 0.1% to 10%]. See Tables 1 and 2 for compositions and concentration ranges.

4. Hydroquinone screen cream is provided for application at a selected interval, between two and four times daily, preferably three times to pigmented areas. An alternate embodiment includes a hydro-alcoholic vehicle at night with the hydroquinone screen used in the morning. This hydroquinone screen cream contains hydroquinone in the range of 0.1% to 2%, preferably 2% as a skin bleach in a non-comedogenic water based emulsion. Also provided in the hydroquinone screen cream is a broad spectrum [UVA and UVB] sunscreen and emollients and moisturizers .

5. Sun protector is applied in the morning for day time use via quick absorbing, oil-free emulsion for sensitive skin. Broad spectrum [UVA and UVB] protection is provided without the use of oxybenzone, lanolins, glycols, etc. The UV filters are Octyl Methoxycinnamate in the range of 1.5% to 7.5%, preferably 7.5% and Menthyl Anthranilate

in the range of 1% to 10% and the oil-free emulsion itself is a water-based emulsion comprised of a water-based vehicle and an ester-based emollient phase.

Composite Skin - Therapy Phase

1. Cleansing twice daily is provided by the soap-free cleanser during the maintenance phase. Cleansing is accomplished with a soap-free cleansing lotion as in the therapy phase, the cleanser being designed to cleanse efficiently without excessive drying or irritation of the skin.

2. The degreaser is applied twice daily to deep clean the skin and remove excess sebum, which may reduce the effectiveness of the treatment pads. The degreaser is applied in the morning only to the areas of T-zone oiliness. The degreaser is a hydro-alcoholic solution containing acetone in the concentration range of 0.1% to 10% but preferably 5% .

3. 15-2-2 Treatment Pads contain the peeling/exfoliating agent combination glycolic acid [preferably 15%, but over the possible range of 1-20%], salicylic acid [preferably 2%, but over the possible range of 0.1% to 5%], and lactic acid [preferable 2%, but over a possible range of 0.1% to 20%]. The peeling/exfoliating agent combination is provided in a penetrating hydro-alcoholic vehicle containing acetone as a co-solvent to insure proper delivery of the peeling/exfoliating agent to the skin area to be treated. The 15-2-2 combination works synergistically with acetone as a peeling agent [preferably 5% but over the possible range of 0.1% to 10%]. See Tables 1 and 2 for compositions and concentration ranges.

4. After the peeling/exfoliating treatment, the therapeutic hydrocortisone balm is applied, containing the well-known anti-inflammatory and anti-pruritic drug hydrocortisone in the concentration range 0.1% to 2.5%, preferably 1% in a hydrous base.

5. Moisturizer and UV protection is applied via quick absorbing, oil-free emulsion for UV protection of combination skin during the day time, and is appli d in the

morning after cleansing. Broad spectrum [UVA and UVB] protection is provided without the use of oxybenzone, lanolins, glycols, etc. The UV filters are Octyl Methoxycinnamate in the range of 1.5% to 7.5% and Menthyl Anthranilate in the range of 1% to 10%.

Composite Skin - Maintenance Phase

1. Cleansing twice daily is provided by the soap-free cleanser during the maintenance phase. Cleansing is accomplished with a soap-free cleansing lotion as in the therapy phase, the cleanser being designed to cleanse efficiently without excessive drying or irritation of the skin.

2. The degreaser is applied twice daily to deep clean the skin and remove excess sebum, which may reduce the effectiveness of the treatment pads. The degreaser is applied in the morning only to the areas of T-zone oiliness and in the evening to the entire face or other skin area to be treated. The degreaser is a hydro-alcoholic solution containing acetone in the concentration range of 0.1% to 10% but preferably 5%

3. Gentle twice daily peeling/exfoliation is accomplished by the use of the 5-2-2 treatment pad during the maintenance phase. The 5-2-2 pad contains glycolic acid [preferably 5%, but over a possible range of 1-20%], salicylic acid [preferably 2%, but over a possible range of 0.1% to 5%], and lactic acid [preferably 2%, but over a possible range of 0.1% to 20%]. The peeling/exfoliating agent combination is carried in a penetrating hydro-alcoholic vehicle containing acetone in the concentration range of 0.1% to 10% as a co-solvent to insure proper delivery of the peeling/ exfoliating agent to the skin area to be treated. The 5-2-2 combination works synergistically with acetone as a peeling agent [preferably 5% but over the possible range of 0.1% to 10%]. See Tables 1 and 2 for compositions and concentration ranges.

4. After the peeling/exfoliating treatment, the therapeutic balm is applied in the evening, containing the well-known anti-inflammatory and anti-pruritic drug

hydrocortisone in the concentration range 0.1% to 2.5%, preferably 1% in a hydrous base.

5. Sun protector is applied in the morning for day time use via quick absorbing, oil-free emulsion for sensitive skin. Broad spectrum [UVA and UVB] protection is provided without the use of oxybenzone, lanolins, glycols, etc. The UV filters are Octyl Methoxycinnamate in the range of 1.5% to 7.5% and Menthyl Anthranilate in the range of 1% to 10% and the oil-free emulsion itself is a water-based emulsion comprised of a water-based vehicle and an ester-based emollient phase.

In summary, the present invention provides a novel home skin peel composition, method and kit for producing healthy and attractive skin.

Other modifications may be made to the present invention, without departing from the spirit and scope of the present invention, as noted in the appended claims.

I Claim:

1. A method for treating certain problem skin conditions, including aging skin, dry skin, photo aged skin, i.e., sun damaged skin, hyperpigmentation or darkly pigmented skin, acne, eczema, thin skin, which occurs commonly in Caucasian women between the ages of 25 and 40, where skin thickness is reduced, sensitive skin and composite dry-oily skin also known as T-zone oily skin, comprising:

periodic convenient topical application of a skin care composition to gradually peel and exfoliate skin to be treated using an applicator pad; wherein the skin care composition comprises

an effective concentration of at least one alpha hydroxy acid to about 20 percent by weight of alpha hydroxy acid in combination with a suitable pharmaceutical vehicle for topical application of the peeling/exfoliating composition to skin to be treated; and

the skin peeling/exfoliating composition is provided presaturated in the applicator pad for convenient topical application to the skin to be treated; and

2. The method as in claim 1 wherein said applicator pad is an abrasive applicator.

3. The method of claim 1 wherein one alpha hydroxy acid is left upon the skin without neutralization or removal for at least six hours.

4. The method of claim 1 wherein the periodic application of skin care composition is made at a frequency of at least once per day.

5. The method of claim 1 wherein the skin care composition for lightly and gradually peeling and exfoliating skin comprises at least one alpha hydroxy acid in a suitable pharmaceutical vehicle as follows:

Materials are listed by Weight Percentage Material

	From about	To About
Disodium EDTA	0.0%	0.3%
Sodium Benzoate	0.0%	0.4%
Witch Hazel E02	0.0%	98%

Polysorbate-20	0.0%	10%
Alpha hydroxy acid	An Effective Amount	20%
Ammonia, dissolved	0.0%	5%
Germall 115	0.0%	0.5%
Acetone	0.0%	10%
Alcohol	0.0%	98%
Water	Balance of Composition to	100.0%

6. The invention of Claim 1 wherein the alpha hydroxy acid is comprised of a mixture of alpha hydroxy acids.

7. The invention of Claim 1 wherein the alpha hydroxy acid is comprised of glycolic acid.

8. The invention of Claim 1 wherein the alpha hydroxy acid is comprised of lactic acid.

9. The invention of Claim 1 wherein the alpha hydroxy acid is comprised of pyruvic acid.

10. The invention of Claim 1 wherein the method of treatment further comprises periodic topical application of an acetone containing a degreaser composition, said degreaser composition comprising a combination of acetone, pharmaceutically suitable alcohol, and purified water.

11. The invention of Claim 10 further comprising a suitable pharmaceutical vehicle for the degreaser composition, wherein said vehicle comprises ingredients which are inert in regard to degreasing activity.

12. The invention of claim 11, wherein the degreaser composition is as follows:

Materials are listed by Weight Percentages

Material	From About	To About
Witch Hazel	0.0%	25%
Propylene Glycol	0.0%	25%
Camphor	0.0%	5%
Acetone	0.1%	10%
Alcohol	0.0%	80%
Sodium Borate	0.0%	1%
Water	Balance of Composition	100.0%

13. A skin care composition and applicator pad for gradually peeling and exfoliating skin by topical

application of the skin treating composition to the skin to be treated, comprising:

a skin peeling/exfoliating composition comprising an effective concentration to about 20 percent by weight at least one alpha hydroxy acid in combination with a suitable pharmaceutical vehicle for topical application of the peeling/exfoliating composition to skin to be treated.

14. The composition according to claim 13 wherein the skin peeling/exfoliating composition is provided presaturated in a cosmetic applicator pad for convenient topical application to the skin to be treated.

15. A skin care composition for lightly and gradually peeling and exfoliating skin as in claim 13, comprising at least one alpha hydroxy acid in a pharmaceutical vehicle as follows:

Materials are listed by Weight Percentages

Material	From About	To About
Disodium EDTA	0.0%	0.3%
Sodium Benzoate	0.0%	0.4%
Witch Hazel E02	0.0%	98%
Polysorbate-20	0.0%	10%
Alpha hydroxy acid	An Effective Amount	20%
Ammonia, dissolved	0.0%	5%
Germall 115	0.0%	0.5%
Acetone	0.0%	5%
Alcohol	0.0%	98%
Acetone	0.0%	10%
Water	Balance of Composition to	100.0%

16. The invention of Claim 13 wherein the alpha hydroxy acid is comprised of a mixture of alpha hydroxy acids.

17. The invention of Claim 13 wherein the alpha hydroxy acid is glycolic acid.

18. The invention of Claim 16 wherein the mixture includes lactic acid.

19. The invention of Claim 16 wherein the mixture includes pyruvic acid.

20. The invention of Claim 16 wherein the mixture includes glycolic and lactic acids.

21. The invention of Claim 16 wherein the mixture includes glycolic and pyruvic acids.

22. A skin care composition and applicator pad for gradually peeling and exfoliating skin by topical application of a skin care composition to the skin to be treated, comprising, in combination:

a skin peeling/exfoliating composition comprising at least one alpha hydroxy acid in an effective concentration and a combination of inactive ingredients providing a suitable pharmaceutical vehicle for topical application of the peeling/exfoliating composition to skin to be treated; and

an abrasive cosmetic applicator pad; and wherein

the skin peeling/exfoliating composition is provided presaturated in the cosmetic applicator pad for convenient topical application to the skin to be treated.

23. The skin care applicator pad of claim 22 wherein the applicator pad is an abrasive pad having two opposite sides, one of said opposite sides having relatively greater abrasiveness for debriding the skin to be treated when said greater abrasiveness side is wiped over the skin to be treated with mild manual pressure by the user; and wherein

one of said opposite sides has relatively less abrasiveness for absorbing oil, dirt and debris from the skin to be treated when said less abrasive side is wiped over the skin to be treated using mild manual pressure.

24. The invention of Claim 23 wherein the side with greater abrasiveness has an abrasiveness selected from the group consisting of mild abrasiveness and moderate abrasiveness.

25. A skin care applicator pad according to Claim 22 wherein the skin composition comprises at least one alpha hydroxy acid in a pharmaceutical vehicle as follows:

Materials are listed by Weight Percentages

Material	From About	To About
Disodium EDTA	0.0%	0.3%

Sodium Benzoate	0.0%	0.4%
Witch Hazel E02	0.0%	98%
Polysorbate-20	0.0%	10%
Alpha hydroxy acid	An Effective Amount	20%
Ammonia, dissolved	0.0%	5%
Germall 115	0.0%	0.5%
Alcohol	0.0%	98%
Acetone	0.0%	10%
Water	Balance of Composition to	100.0%

26. The invention of claim 25 wherein the alpha hydroxy acid is comprised of a mixture of alpha hydroxy acids.

27. The invention of Claim 26 wherein the mixture is comprised of glycolic acid.

28. The invention of Claim 26 wherein the mixture is comprised of lactic acid.

29. The invention of Claim 26 wherein the mixture is comprised of pyruvic acid.

30. The invention of Claim 26 wherein the mixture is comprised of glycolic and lactic acids.

31. The invention of Claim 26 wherein the mixture is comprised of glycolic and pyruvic acids.

32. The invention of Claim 26 wherein the mixture is comprised of glycolic, lactic and pyruvic acids.

33. The invention of Claim 26 wherein the mixture is comprised of lactic and pyruvic acids.

34. A method of treating a skin condition selected from the group consisting of

aging skin; photo-aging skin; hyperpigmented skin; darkly pigmented skin; acne; thin skin; sensitive skin; and composite dry-oily skin; and wherein

the method is comprised of a series of steps, respectively specific to the skin condition to be treated, including the respective steps comprising (a) cleansing the skin to be treated; (b) degreasing the skin to be treated by applying a unit dose of a suitable degreaser composition with an applicator pad presaturated with said degreaser composition and; (c) treatment of the skin with suitable

mild peeling and/or exfoliating agents not requiring neutralization or removal of the suitable agents from the skin of the user, by applying a unit dose of a mild peeling and/or exfoliating agent with an applicator pad presaturated with said peeling and/or exfoliating agent; and wherein said respective steps comprise convenient periodically repeated user self-application of a mild, combination of skin peeling agents using an applicator pad presaturated with a respective material required for each step, and

further wherein said applicator pad has an abrasiveness for applying said agents and treating the skin in a non-professional setting.

35. The method of Claim 34, wherein cleansing the skin to be treated includes applying a non-soaping cleanser lotion by wiping the skin to be treated with an applicator pad presaturated with a measured quantity of cleanser, said pad wiping being done with mild manual pressure; and further comprising applying suitable post-treatment compositions to the skin to be treated.

36. The method of treating skin as in claim 35, wherein the unit dose of the degreaser composition is between about 0.20 grams and about 2.0 grams of degreaser per pad

wherein the peeling and/or exfoliating step is accomplished in a therapeutic phase and in an alternate maintenance phase

the therapeutic phase peeling and/or exfoliating step being accomplished by applying to the skin to be treated a unit dose of a peeling and/or exfoliating material presaturated into an applicator pad and

wherein the concentration of glycolic acid in said peeling and exfoliating material is from about 0.1% and 20% by weight, and the concentration of lactic acid is from about 0.1% and 20% by weight, the concentration of salicylic acid is from about 0.1% and 5% by weight; and the concentration of acetone is from about 0.1% and 10% by weight;

wherein the unit dose of the therapeutic peeling and/or exfoliating material is between about 0.20 grams and about 2.0 grams per pad and

wherein the maintenance phase peeling and/or exfoliating step is performed by applying to the skin to be treated a unit dose of a peeling and/or exfoliating material, wherein the unit dose has been presaturated into an applicator pad and

the concentration of glycolic acid is from about 0.1% to about 5% by weight, and

wherein the unit dose of the maintenance peeling and/or exfoliating material is between about 0.20 grams and about 2.0 grams per pad.

37. The method of treating skin as in claim 3, wherein the peeling and/or exfoliating material contains resorcinol in an amount from about 0.1% and 10% by weight.

38. The method of treating skin as in claim 36, wherein the skin conditions to be treated are aging skin, photo-aging skin and dry skin, and wherein sun screen and anti-inflammatory materials are employed in a sequence of steps following step "c".

39. The method of treating skin as in claim 36, wherein the skin conditions to be treated are sensitive skin, thin skin and eczema, and wherein the degreaser composition is an alcohol containing solution, and wherein sun screen and anti-inflammatory materials are employed in a sequence of steps following step "c".

40. The method of treating skin as in claim 36, wherein the skin conditions to be treated are sensitive skin, thin skin and eczema, and wherein the degreaser composition includes acetone in a concentration from about 0.1% and 5% by weight, and wherein sun screen and anti-inflammatory materials are employed in a sequence of steps following step "c".

41. The method of treating skin as in claim 36, wherein the skin condition to be treated is acne.

42. The method of treating skin as in Claim 36 wherein the therapeutic phase is from 5 days to 20 days in

duration of daily application and the maintenance phase is from 15 days to 60 days in duration of daily application.

43. The method of method claim 42 wherein the maintenance phase is performed after the therapeutic phase.

44. The method of Claim 34, wherein said applicator pad has an abrasiveness selected from the group consisting of mild abrasiveness, moderate abrasiveness and strong abrasiveness.

45. The method of Claim 34, wherein said degreaser composition includes acetone in a concentration from about 0.1% to about 10% by weight.

46. A skin care kit assembly for treating a skin condition, wherein the skin condition to be treated is selected from the group consisting of aging skin, photo-aging skin, dry skin, acne, hyperpigmented skin, darkly pigmented skin, sensitive skin, thin skin, eczema and composite dry-oily skin by convenient user repeated self-application of a combination of skin treating agents using an applicator pad for applying said agents in a non-professional setting, comprising steps performed periodically by the user, wherein the skin treating agents require no neutralization or removal from the skin of the user, and wherein the kit comprises:

an instructional means, containing thereon indicia for administration of sequentially applied components for skin care;

a sequential dispenser means containing a plurality of daily sets of kit sub-assembly components, each kit sub-assembly component comprising:

a. a first container including a plurality of applicator pads presaturated with a unit dose of a non-soaping and/or non-detergent cleanser lotion;

b. a second container including a plurality of applicator pads presaturated with a unit dose of a degreaser composition; and

c. a third container including a plurality of applicator pads presaturated with a unit dose or a composition of mild skin peeling agents.

47. The kit as in claim 46 wherein the kit is used in accordance with a series of steps for each respective skin condition, the series of steps being in accordance with said instructional means.

48. A kit as in claim 47, wherein said sequential dispenser means includes means for dispensing daily sets of subassembly components including the combination of skin treating agents acting gradually over a selected period of days, for at-home use without requiring neutralization or removal from the skin of the user, comprising:

a unit dose of cleaner lotion; a unit dose of a degreaser composition to be applied to skin to be treated and a unit dose of a peel and/or exfoliator composition for applying sequentially to the skin to be treated after the first degreaser composition, wherein said cleanser, degreaser and peel compositions are applied with a respective individual cosmetic applicator pad presaturated therewith,

and wherein said applicator pad has a specific level of abrasiveness selected from the group consisting of mild abrasiveness, moderate abrasiveness and strong abrasiveness, and wherein the second peel and/or exfoliator composition is applied to the skin to be treated after the degreaser composition, and further wherein the degreaser and peel compositions are respectively applied to the skin to be treated in a measured unit therapeutic dose, said degreaser composition comprising an aqueous composition containing from 0.1% to about 10% of acetone and said peel and/or exfoliator composition comprising an admixture of from 0.1% to about 5% of salicylic acid, from 0.1% to about 20% of lactic acid, from 0.1% to about 20% of glycolic acid and from 0.1% to about 10% of acetone.

49. The kit as in Claim 48, further comprising a unit maintenance dose of the peel and/or exfoliator composition, wherein said maintenance dose comprises concentrations of the glycolic acid, relative to the concentration of the lactic acid and salicylic acid components, respectively

therein are substantially smaller than said respective concentrations in said therapeutic unit dose.

50. The Kit as in Claim 48, wherein the unit therapeutic dose per presaturated applicator pad of the degreaser composition is between about 0.20 grams and about 2.0 grams and the therapeutic unit dose of the peeling composition is similarly between about 0.20 grams and about 2.0 grams.

51. The Kit as in Claim 50, wherein the unit therapeutic dose per presaturated applicator pad of the degreaser composition is between about 0.50 grams and about 1.0 grams and the therapeutic unit dose of the second peel and/or exfoliator composition is similarly between about 0.50 grams and about 1.0 grams.

52. The Kit as in Claim 49, wherein the unit maintenance dose per presaturated applicator pad of the degreaser composition is between about 0.20 grams and about 2.00 grams and the maintenance unit dose of the peel and/or exfoliator composition is similarly between about 0.20 grams and about 2.00 grams.

53. The kit as in Claim 52 wherein the unit therapeutic dose per presaturated applicator pad of the degreaser composition is between about 0.50 grams and about 1.0 grams and the therapeutic unit dose of the peeling composition is similarly between about 0.50 grams and about 1.0 grams.

54. The Kit as in Claim 48, wherein further the peel and/or exfoliator composition contains resorcinol, and said peel and/or exfoliator composition comprising an admixture of from 0.1% to about 5% of salicylic acid, from 0.1% to about 20% of lactic acid, from 0.1% to about 20% of glycolic acid, from 0.1% to about 10% of resorcinol and from 0.1% to about 10% of acetone.

55. The kit according to Claim 54, further comprising a unit maintenance dose of the peel and/or exfoliator composition wherein said maintenance dose comprises concentrations of resorcinol which are substantially

smaller than said resorcinol concentration in said therapeutic unit dose.

56. The kit as in Claim 54 wherein the unit therapeutic dose per presaturated applicator pad of the degreaser composition is between about 0.20 grams and about 2.0 grams and the therapeutic unit dose of the peeling composition is similarly between about 0.20 grams and about 2.0 grams.

57. The kit according to Claim 56 wherein the unit therapeutic dose per presaturated applicator pad of the degreaser composition is between about 0.50 grams and about 1.0 gram and the therapeutic unit dose of the peel and/or exfoliator composition is similarly between about 0.50 grams and about 1.0 gram.

58. The kit according to Claim 55 wherein the unit maintenance dose per presaturated applicator pad of the degreaser composition is between about 0.20 grams and about 2.0 grams and the maintenance unit dose of the peel and/or exfoliator composition is similarly between about 0.20 grams and about 2.0 grams.

59. The kit according to Claim 58 wherein the unit therapeutic dose per presaturated applicator pad of the degreaser composition is between about 0.50 grams and about 1.0 gram and the therapeutic unit dose of the peeling composition is similarly between about 0.50 grams and about 1.0 gram.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US94/06443

A. CLASSIFICATION OF SUBJECT MATTER

IPC(5) :A61K 7/48
US CL :424/401; 514/844, 848
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/401; 514/844, 848

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y ---- A	US, A, 4,891,228 (THAMAN ET AL) 02 January 1990, see Examples 1-3.	1-45 -------- 46-59
Y --- A	US, A, 5,091,171 (YU ET AL) 25 February 1992, see columns 6-7 and the Examples.	1-45 -------- 46-59

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be part of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 27 JULY 1994	Date of mailing of the international search report 06 SEP 1994
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer J. VENKAT Telephone No. (703) 308-2351

Form PCT/ISA/210 (second sheet)(July 1992)*